GOVERNMENT OF INDIA
SCIENCE AND TECHNOLOGY
LOK SABHA

UNSTARRED QUESTION NO:1196
ANSWERED ON:25.02.2003
WEATHER PREDICTION
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Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

(a) whether it is a fact that weather prediction in North American and European countries is accurate to a large extent;

(b) if so, the reason for the weather prediction not being so accurate in India ; and (

(c) the steps being taken to improve the weather forecasts?

Answer

THE MINISTER OF STATE IN THE MINISTRY OF SCIENCE & TECHNOLOGY (SHRI BACHI SINGH RAWAT)

(a) to (c): A Statement is attached.

STATEMENT AS REFERRED IN REPLY TO PARTS (a) TO (c) OF LOK SABHA UNSTARRED QUESTION No 1196 DUE FOR 25.2.2003 REGARDING `WEATHER PREDICTION`

Yes, Sir. It is a fact that weather prediction in North America and Europe, which are situated in the extra-tropical latitudes, is more accurate than that over tropical countries. The main reason is that atmospheric processes at higher latitudes are advective (horizontal) in nature and the movement of weather systems follows an orderly track. The weather in the tropics is characterised by convective (vertical) processes, which are localised and short-lived. As far as India is concerned, although the observation network is well-developed over land, the surrounding seas and mountains are data-sparse regions.

Government has taken number of steps to improve weather forecasting in the country. A National Centre for Medium Range Weather Forecasting (NCMRWF) has been set up in New Delhi to provide specialized medium range forecasts, particularly for the farming community. Under this Centre, 82 Agro-Field Met. Units (AFMUs) have been functioning in various locations in the country.

A dedicated Indian geostationary meteorological satellite (now named Kalpana-1) was launched in September, 2002 and is providing high resolution cloud imageries in the Visible, IR and Water Vapour channels. Similarly the new satellite in the INSAT series, INSAT-3A, planned for launch in the early 2003 will provide 1 km resolution imagery.

Three Doppler Weather Radars (DWRs) have started functioning along the east coast, at Chennai, Sriharikota and Kolkata. Three more such radars are to be installed at Paradip, Visakhapatnam and Machilipatnam. The DWR has the capability of providing the velocity structure of tropical cyclones.

A number of data buoys have been deployed over the Bay of Bengal and the Arabian Sea by National Institute of Ocean Technology (NIOT) under National Data Buoys Programme (NDBP) of Department of Ocean Development. They give continuous observations o wind, pressure, temperature (ambient & sea surface temperature), wave heights etc. which are of immense use to the forecasters.

In order to strengthen the observing system further, 20 High Wind Speed Recorders also haverecently been installed at the coastal stations.

With the advanced computing facilities and with the development of NWP models and associated data assimilation techniques, the forecasting skill is being improved considerably. Research in Tropical Meteorology and forecasting of weather is continuously pursued, so that the model performance is improved further to yield a better forecast.